

IN THE CLAIMS:

1. (Currently Amended) A hydraulic accumulator comprising:

a rigid tank having an open interior;

first and second fixtures on said tank for fluid communication with gas and liquid sources exterior to said tank;

a flexible, non-elastic bladder, mounted within said tank and having an interior in communication with one of said fixtures, said bladder separating the open interior of the tank into a gas space and a working fluid space respectively communicating through said fixtures; and

a shut-off valve mounted in a second of said fixtures and closing said second fixture responsive to coming into contact with said bladder when the volume of the working fluid within said accumulator falls falling to a predetermined low value.

2. (Original) A hydraulic accumulator according to claim 1 wherein said bladder is in the form of a metal bellows.

3. (Original) A hydraulic accumulator according to claim 2 wherein said gas space is defined between said tank and said bladder and contains a mass of compressed gas and wherein the working fluid is a liquid which enters and exits the interior of said bladder through said second fixture.

4. (Original) A hydraulic accumulator according to claim 2 wherein said interior of said bladder contains a mass of compressed gas, and wherein the working fluid is a liquid which enters and exits said working fluid space which is defined between said tank and said bladder.

5. (Original) A hydraulic accumulator according to claim 1 wherein said interior of said bladder contains a mass of compressed gas, and wherein the working fluid is a liquid which enters and exits said working fluid space which is defined between said tank and said bladder.

6. (Original) A hydraulic accumulator according to claim 1 wherein said bladder is formed of a metal foil.

B¹ 7. (Previously Presented) A hydraulic accumulator according to claim 6 wherein said metal foil is between 0.003 and 0.0007 inches thick.

8. (Original) A hydraulic accumulator according to claim 6 wherein said metal foil has at least one surface coated with a flexible polymer.

9. (Original) A hydraulic accumulator according to claim 1 wherein said bladder is in the form of a bellows.

10. (Cancelled)

11. (Original) A hydraulic accumulator according to claim 1 further comprising a coil spring attached to said second fixture and surrounding said shut-off valve.

12. (Original) A hydraulic accumulator according to claim 1 further comprising a spring internal to the bladder and attached to opposing ends of the bladder.

13. (Original) A hydraulic accumulator according to claim 9 wherein said bellows is a non-permeable polymer.

14. (Currently Amended) A hydraulic accumulator comprising:

a rigid tank having an open interior;

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first and second fixtures on said tank for fluid communication with gas and liquid sources exterior to said tank;

a bladder, mounted within said tank and having an interior in communication with one of said fixtures, said bladder separating the open interior of the tank into a gas space within the bladder and a liquid space surrounding the bladder, respectively communicating through said fixtures; and

a shut-off valve mounted in a second of said fixtures and closing the second of said fixtures responsive to coming into contact with said bladder when the volume of the working fluid within said accumulator falls to a predetermined low value; and

a vent formed in said tank and in communication with said liquid space.

15. (Cancelled)

16. (Currently Amended) A hydraulic accumulator according to claim 14 ~~15~~ wherein said second fixture provides communication between said liquid source and said liquid space.

17. (Previously Presented) A hydraulic accumulator according to claim 1 wherein said shut-off valve opens and closes a second of said fixtures, said second fixture providing communication between one of said sources and space within the interior of said tank surrounding said bladder.

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18. (Previously Presented) A hydraulic accumulator according to claim 14 wherein said bladder is flexible and non-elastic.

19. (Newly Added) A hydraulic accumulator according to claim 14 further comprising a coil spring attached to said second fixture and surrounding said shut-off valve.
